PMC COVID Redesign for Care

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Problem Statement

The COVID-19 crisis has put a strain on PPE supplies, staffing and patient care workflow.

GOALS:

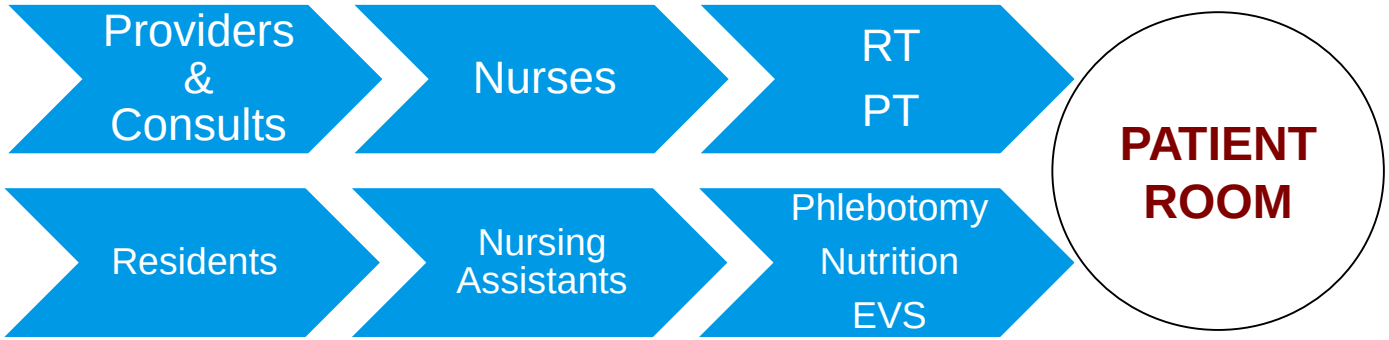
- **Protect staff**
- **Conserve supplies**
- **Provide safe patient care**
- **Reduce risk of COVID-19 transmission**

PILOT UNIT: ACU

Current State – ACE Unit

- **Providers: 3 hospital groups**
  -Penn
  -SAI
  -Goldberg
- **Consultants: ID Care, Dr. Mamidi**
- **Residents**
- **Nurses**
- **NAs**

- **Respiratory**
- **EVS – for terminal cleaning**
- **Nutrition – comes on to unit**
- **Phlebotomy**
- **PT – (sporadic)**
- **Palliative – (sporadic)**
- **Case Management/Social Work – (teleconferencing)**



ACE Patient Flow

Patient Entry
- Occurs through ED only
- ID consult for testing completed in Emergency Dept
- Decision to admit, transfer initiated

Transfer
- Via stretcher
- Transporter contact

Unit Admission
- RN
- NA

Daily Routine
- Q4 VS
- Physician rounds
- Meds
- Labs
- Routine care

PRN
- Stocking
- Trash removal
- Labs
- Meds
- U/S
- X-Ray

Discharge
- Masked
- Walked out by RN

Other Contact: ER, Pharmacy, Xray, US, Security

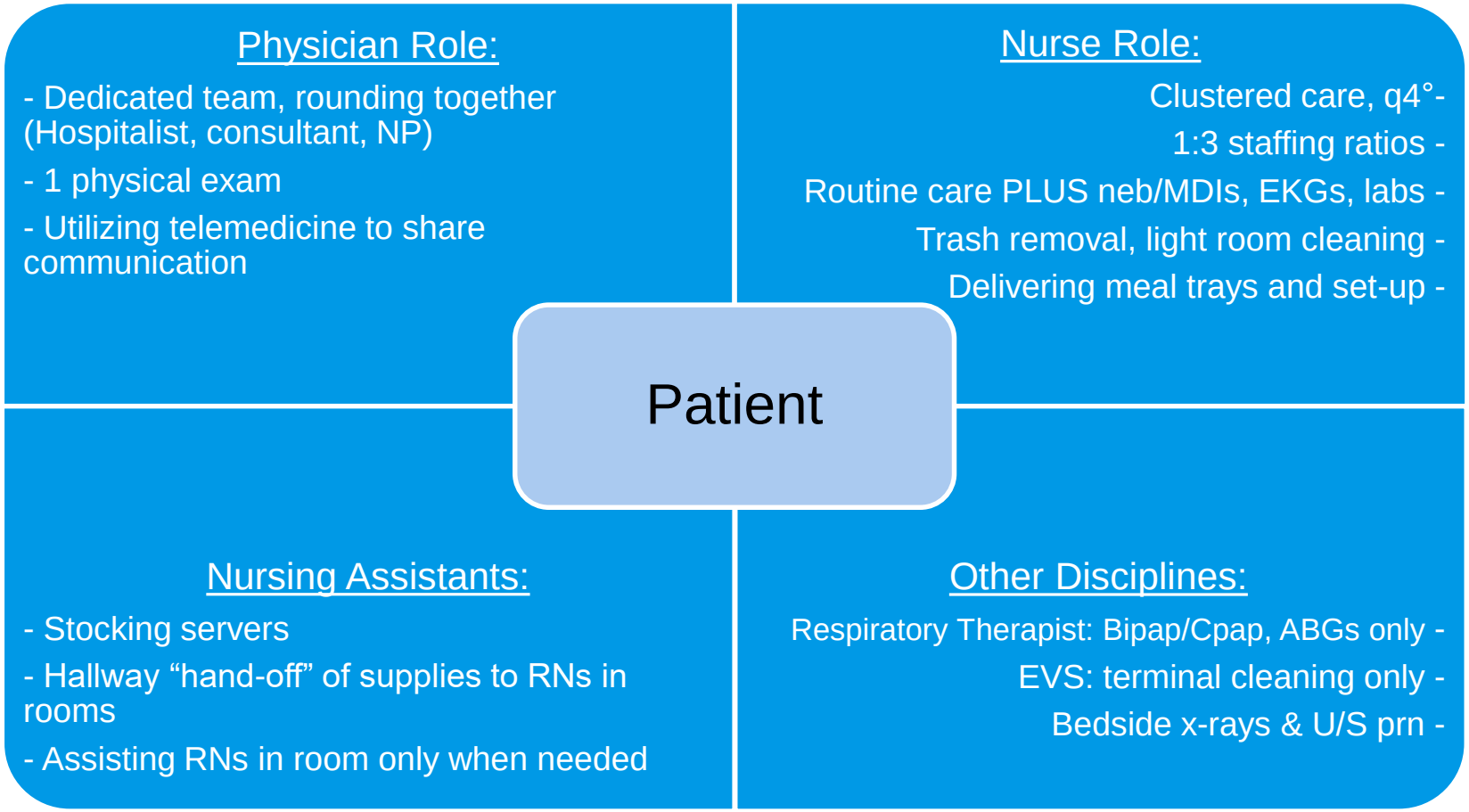
Root Cause

- **Frequent donning/doffing episodes.**
- **Too many staff contact points.**
- **Nonstandardized care models.**

Countermeasures

- Clustered care models that minimize needed staff and number of entries/exits from patient rooms.
- Providers using team approach so only 1 exam is needed.
- Utilize telemedicine when possible.
- Identify care processes performed by other professionals that can be performed by nursing.
- Train nurses to assume responsibility of these processes as appropriate.
- Clearly define workflows to outline standard daily work.
- Cohorting of staff.

New ACE Care Model



Recommendations

- Develop nursing care checklist to organize clustered care.
- Explore process needed to relocate IV pumps outside of patient rooms.
- Use cohorted team consisting of RNs, NAs, unit leaders.
- Redefine EVS role for unit and rooms.
- Ensure fully stocked isolation carts for every room, checked twice daily.
  - Develop unit-specific par levels

Nurse-Designed Checklist

RN CHECKLIST FOR CLUSTER CARE

Before Entering Rooms

- ☐ Asses patient's pain level for meds / Ask if they need anything brought in.
- ☐ Check MAR and Pyxis.
- ☐ Consider need for additional RN/NA assistance for care.

8:00 Rounds

☐ VS, Assessment	☐ Blood Glucose	☐ Meds	☐ Position Change, Bathroom
☐ AM Care	☐ EKG, if ordered	☐ IV Care, Flush	☐ Respiratory Treatments, Care
☐ Check Server, Supplies	☐ Instruct/Assist patient to order meal	☐ Set up for Meal/Feeding patient	☐ Environmental Check (trash, linen, trays, water/snacks, etc.)
☐	☐	☐	☐

11:00 – 12:00 Rounds

☐ VS, Assessment	☐ Blood Glucose	☐ Meds	☐ Position Change, Bathroom
☐ Instruct/Assist patient to order meal	☐ Set up for Meal/Feeding patient	☐ Respiratory Treatments, Care	☐ Environmental Check (trash, linen, trays, water/snacks, etc.)
☐ EKG, if ordered	☐ IV Care, Flush	☐	☐

4:00 Rounds

☐ VS, Assessment	☐ Meds	☐ Position Change, Bathroom	☐ Environmental Check (trash, linen, trays, water/snacks, etc.)
☐ EKG, if ordered	☐ IV Care, Flush	☐	☐

EVS Plans

- **Nursing will be clearly identified with isolation precaution signs. If EVS is unsure of a room which has a PUI and/or COVID positive patient, they will check with the nurse in charge.**
- **To minimize exposure to additional employees, nursing will remove trash as needed from each room where a PUI and/or COVID positive patient has been identified. The trash will be placed in the bin outside and/or tied up for EVS pickup. Nursing will then reline the waste containers inside the rooms.**
- **If the floor is grossly soiled and/or there is a spill that cannot be cleaned up by nursing staff, please contact EVS so that the manager is able to perform proper cleaning. The EVS employee on your floor will not be able to do this. Again, this is to minimize exposure.**
- **EVS will round on empty rooms and/or non PUI/COVID positive patient rooms to ensure that all supplies are fully stocked.**
- **EVS will terminally clean all PUI/COVID-19 rooms as protocol. They must wait 1 hour after patient exits room before starting to clean.**
- **If a wall-mounted sharps container, soap dispenser and/or paper towel dispenser needs changing in a PUI/COVID positive patient room, contact EVS so that a manager is able to replace the container/dispenser. The EVS employee on your floor will not be able do this. Again, this is to minimize exposure.**
- **EVS will clean all other standard isolation rooms on a routine basis.**

Additional Support Measures

- COVID RN SWAT Team x19534
- Supply Carts/PPE storage
- Bedside Reference Binders
- Cohorted Team Care
- Cross training nurses to function for higher levels of care

ED Care Model Changes

- All patients at the entrance to divert respiratory cases to the tent.
  - Cases requiring higher level of care brought into the main ED
  - Patients requiring CXR from the tent are taken to room 1 of the main ED, changed, portable x-ray occurs, patient changed back (presumed to be d/c) and returned to the tent waiting for results
- All staff being screened prior to entering building.
- Shift huddles occurring for fast moving edits to any process and updates.
- PPE Plans:
  - Every patient is given a surgical mask at the time of screening
  - Nurses assigned to the tent are in PPE
  - ED staff in all areas are in PPE for the duration of their shift – goggles, gown, face shield, mask
  - PAPR are being utilized for intubation
  - Surgical gowns worn all times with isolation gown overtop
- Swabbing is not being performed in the tent.
  - Chair outside the tent for swabbing in the open air when necessitated
- All stock carts are moved into the hallways.
- Intubation Plans:
  - Development of intubation cart with COVID supplies
  - Intubation cart developed with multidisciplinary team
  - Consideration of developing an intubation shield to be utilized for all intubations to decrease viral load
- Chairs are allocated 8 feet apart in the tent.
- Chairs removed from all ED rooms to allow for additional space for care delivery.
- No visitor policy in place.
- LDR patients:
  - Screened
  - LDR staff meets them in ED and guides to the unit
- All Glidescope stylettes being sent to Central Supply.
- PAS moved into tent for registration.

CCU Care Model Changes

- PPE Plans:
  - PAPR education for both processes
  - Intensivist assigned a PAPR
  - PPE review – donning and doffing with a buddy
  - North head-visors in use by team not using PAPR
  - Par levels developed for PPE to ensure supplies are readily available
- All staff being screened prior to entering building.
- Nursing assigned in teams.
  - Assignment sheets redesigned
  - Unit cut in quarters
- PACU nursing being educated for the surge plan.
- Shift huddles occurring for fast moving edits to any process and updates.
- Use of additional Trilogy ventilators.
  - Education provided
- Intubation cart designed with nursing/ respiratory/intensivists.
- Consideration of developing an intubation shield to be utilized for all intubations to decrease viral load.
- Proning/tortoise shells being used (seeing more and more patients proned).
  - 6 ICU beds arrived which will enable proning to occur for those patients who require
- All Glidescope stylettes being sent to Central Supply.
- Viral filters in stock by respiratory.
- Use of walkie-talkies for runner outside of rooms.
- Nightshift runner in place for additional supplies needed.
- Moment of silence by the team when an expiration occurs.
- Therapeutic efforts by manager to take COVID off the mind for a few minutes.

CCU Clustered Care Roles Defined

Clustered Care Team

- 3 RNs, RN Runner, NA
- 6 Beds

Roles

- **RN:** Q4˚ VS, assessments, meds, IVs, wound care, procedures, positioning, hygiene, trash/environmental cleanup
- **RN Runner:** Scribe, prepare/scan/hand off medications, supply hand-off
  - **Receive/relay calls from Telemetry monitor techs**
  - **Responsible for updating families**
- **NA:** In-room assistance, Q4˚ stocking servers, checking unit par levels, cleaning equipment and unit, running lab specimens, retrieving blood products

Suggestions & Requests

- Additional RNs & NAs to support new model
  - Including Unit Resource RN
- Report sheets for telemetry monitor call receiver (Runner)
- Par levels maintained 7days/week
- Additional training for roles
- Increased EVS support
  - In-room
  - Unit
- Monitor-driven temperature assessments

Challenges

- 1:1 acuity
- Monitor BPs require a manual reset when out-of-range pressures are obtained
  - Unnecessary donning/doffing episodes
- Assessments require checking ventilator settings, IVs and monitor VS
  - Can’t be seen without going into rooms.

SCU Care Model Changes

Clustered Care

- **RN, NA, Runner**
- **1:4 for all shifts**
- **RN Checklist for patient care**

Roles

- **RN:** assume all in-room care, simple environmental cleaning (trash, trays, etc.), utilize assistance as needed
- **NA:** assist with in-room patient care when needed, stocking, unit support, equipment cleaning
- **Runner:** assist with doorway handoffs, running/retrieving supplies, lab work, facilitate communication from patient rooms to unit
  - 5 Needed
  - Mixture of RNs and NAs
  - 1 Runner: 2 RNs

Additional Plans

- Secretary/NA 24/7
- ANM responsible for updating families
- Establish new par levels, deliver daily
- Increase Cisco phone quantity – one for everyone
- Increase pager quantity – increased volume of patients on cont. pulse ox
- Additional EVS support
- Additional staff training
  - Nursing care
  - Runner role

Barriers and Lessons Learned

What Did Not Work?	Why?
RNs assuming responsibility for phlebotomy	- Not enough RNs with this skill set - RNs overwhelmed by new demands are not ready to learn another skill
IVs extended into hallways	- Only works on units with immobile patients, otherwise a fall risk - Challenges with scanning patient labels, mobile scanners
Hallway or bedside COVID reference binders	- Not utilized consistently - Employ single reference binder at nurses stations instead
Storing PPE in servers or carts	- Impeded quick assessment of restocking need - PPE stocked in plain sight facilitates par level assessments
Standard PPE par levels throughout the hospital	- Rapidly changing patient acuities and differing unit cultures require individual par level assessments - Reevaluate needs daily

Greatest Takeaway

Frontline clinical nurse input is essential when rapid innovation is needed.

Why?

- Resourceful by nature
- Provide real-time assessments of their individual unit needs
- Offer realistic suggestions
- Keenest evaluation of patients' needs
- **Clinical nurses who feel supported and valued for their knowledge can embrace change more easily and manage stressful work environments better**